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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,981	09/13/2006	Richard Oberland	17653.34B	1255
22913	7590	01/06/2010	EXAMINER	
Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, UT 84111			TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2613	
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			01/06/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,981	OBERLAND, RICHARD	
	Examiner	Art Unit	
	Dzung D. Tran	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. US Publication no. 2006/0245763 in view of Miyamoto US Patent no. 6,559,996.

Regarding claims 1 and 4, Ishida discloses in Figure 1, a method/apparatus of an optical transmitter comprising:

a differential encoder 3 having first and second outputs, the first and second outputs being of opposite polarity to one another (e.g., the first output D and second output E = opposite polarity of D), wherein the differential encoder differentially encodes data to produce first and second data streams of opposite polarity;

a first RZ converter connected to the first output of the differential encoder and a second RZ converter connected to the second output of the differential encoder, wherein the first and second RZ converters convert the first and second data streams to RZ signal format (see RZ encoder 4);

a dual electrode Mach Zehnder modulator 2 to which an unmodulated coherent light source 1 is coupled, wherein the dual electrode Mach Zehnder modulator phase modulates a coherent light signal from the coherent light source and outputs as a differential phase shift keyed RZ optical signal, and wherein and second electrodes of the Mach Zehnder modulator are driven sequentially by the first RZ driven data stream and the second RZ driven data stream, respectively (see Figure 1).

Ishida does not specifically disclose a first RZ driver connected to an output of the first RZ converter and a second RZ driver connected to an output of the second RZ converter, wherein the first RZ driver amplifies a first of the data streams to generate a first RZ driven data stream after the first data stream has been converted to the RZ signal format, and the second RZ driver amplifies a second of the data streams to generate a second RZ driven data stream after the second data stream has been converted to the RZ signal format. However, to use an amplifier as a drive circuit is well known in the art as discloses in Figure 1, element 3 of Miyamoto. At the time of the invention was made, it would have been obvious to an artisan to connect the drive circuit taught by Miyamoto to the first output of RZ converter and the second output of RZ converter 4 of the apparatus of Ishida.

One of ordinary skill in the art would have been motivated to do that in order to boost the driving signal to the acceptable level.

Regarding claims 2, the combination of Ishida and Miyamoto discloses the first drive circuit is connected to the output of the first RZ converter and the second drive circuit is connected to the output of the second RZ converter

Regarding claims 3 and 6, Ishida discloses wherein one of the RZ converter outputs can be delayed by adjusting the phase of a clock signal input to the RZ converter (see Figure 3).

Regarding claim 5, Ishida discloses the first and second RZ data stream are inverted RZ data stream (e.g., the first output D and second output E = opposite polarity of D; see figure 1).

Regarding claims 7 and 8, whether or not the first and second RZ drivers are inverting RZ drivers (claim 7) or the first and second RZ drivers are non-inverting RZ drivers (claim 8) is merely an engineering design choices.

Response to Arguments

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran

12/31/2009

/Dzung D Tran/

Primary Examiner, Art Unit 2613

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